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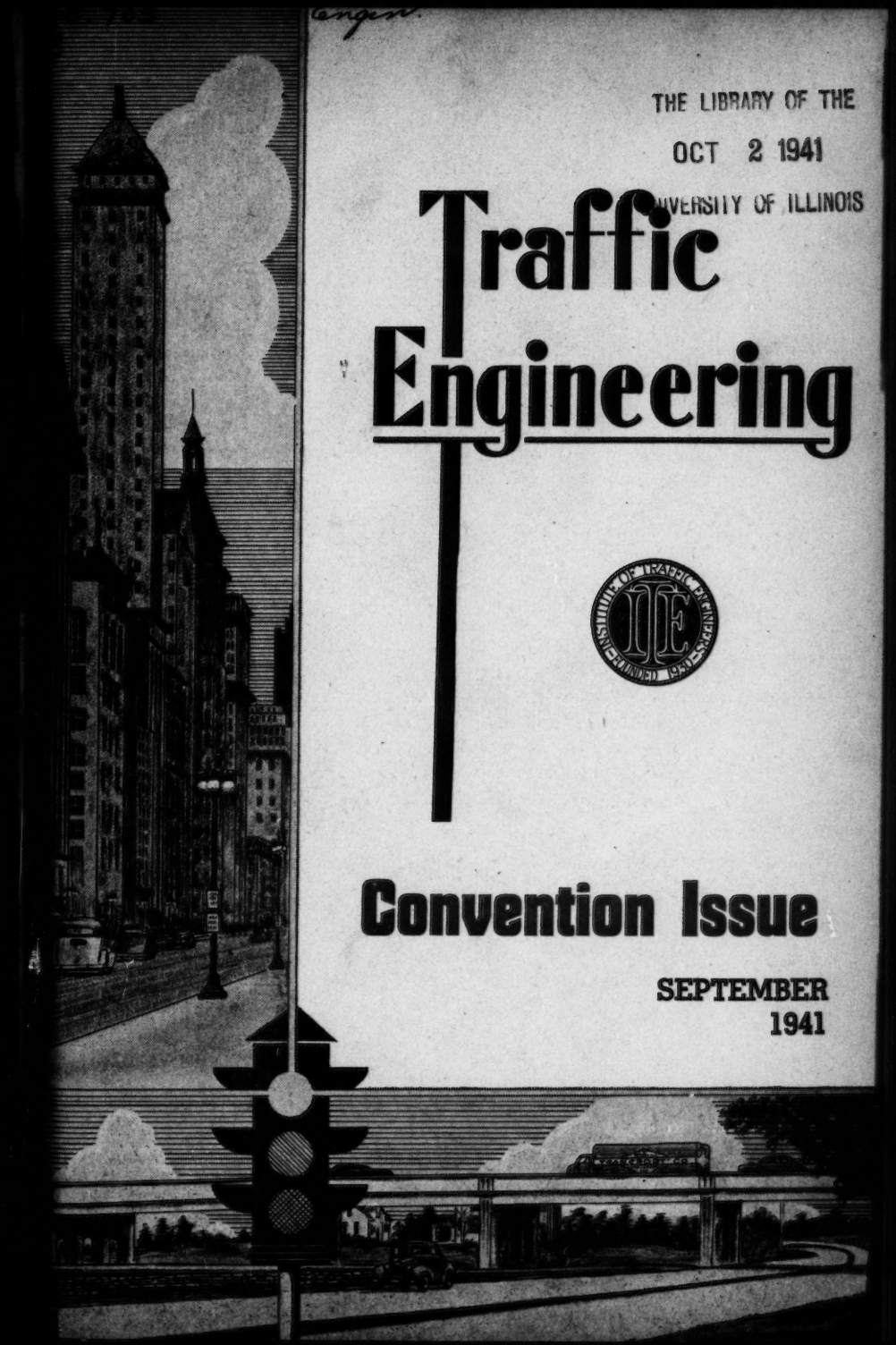

Convention Issue

SEPTEMBER
1941

Traffic Engineering

May We Offer . . .

Frankly Speaking	Hawley S. Simpson	117
Emergency Traffic Responsibilities	Wilburn Cartwright	118
Traffic Engineering in Highway Departments,	Thomas H. MacDonald	119
Highway Officials and Traffic Engineers	J. S. Williamson	120
Priority for Traffic Engineering	Norman Damon	121
A Road Builder Speaks	Charles M. Upham	122
Relation of Traffic to Planning	Earle S. Draper	123
Relationship of Motor Vehicle Administration To Traffic Engineering	A. W. Bohlen	125
Emergency	Earl J. Reeder	126
"Sweat, Toil and Tears"	Donald S. Leonard	127
Case Histories and the Traffic Engineer	C. J. Tilden	128
Help Defense—Stop Accidents		129
"Dear Margie"		130
Traffic Engineer's Handbook		133
Seeing Chicago	Otto K. Jelinek	134
Stop, Look and Listen		135

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VOLUME XV SEPTEMBER, 1941 NUMBER 5

Frankly Speaking

Inventory

AS the Institute closes another year and we pause to appraise its accomplishments, certain significant achievements come first to mind.

This magazine, TRAFFIC ENGINEERING, as an example, has become a truly professional publication of which all members can well be proud. Under the guidance of its retiring editor, Lawrence Tipton, it has been steadily improved, and its scope and circulation enlarged, until today it compares favorably with technical publications of many years standing. All of this has been accomplished by the voluntary efforts of the editor and his staff who have freely contributed of their own time without thought of monetary consideration.

In other activities of the Institute we have experienced the same sort of valuable cooperation. Proceedings, edited this year by Roger Gilman, was printed in book form for the first time. The Standards and Specifications Committee under the chairmanship of William Brandes has added to the signal head specification a second standard covering traffic signal controllers. These are the beginning of a series which will eventually include other traffic devices.

Another accomplishment of far-reaching importance is the publication of TRAFFIC ENGINEERING HANDBOOK which will be off the press October 1. Planned in the beginning as a publication of between 100 and 200 pages, it has expanded to a full-sized book of 350 pages with over 150 illustrations. The preparation and editing of the manuscript has been done exclusively by members of the Institute, under the direction of the co-editors, Leslie Sorenson and Harold Hammond. To them and to their associates in this work, the Institute is indebted to an extent that can never be repaid, and equally to the National Conservation Bureau through whose cooperation the book became a reality.

Whatever credit there may be in these, and other accomplishments of the Institute, that credit goes not to the officers but to the more than 200 men who constituted the membership and without whose full cooperation and support there could be little of which to be proud.

In now retiring from office, I wish to extend on behalf of your officers, to each of the members of the Institute, our sincerest thanks for their many and valuable contributions, which in the whole have made the Institute what it is today.

Stanley S. Simpson

President, Institute of Traffic Engineers

VOLUME XV SEPTEMBER, 1941 NUMBER 5

EMERGENCY TRAFFIC RESPONSIBILITIES

HON. WILBURN CARTWRIGHT, *Chairman,*
House Roads Committee, U. S. House of Representatives

HIGHWAY transportation has grown to an all-time high in recent months.

Counts made at more than 400 automatic traffic-recorder stations throughout the country indicate that on State highways traffic was about 17 percent greater during the first 4 months of this year than during the same period a year earlier. The increase on local roads, as measured by a much more limited number of recorders, was about 10 percent.

In 1940, motor-vehicle travel on all roads was about 6 percent greater than during 1939, according to the Public Roads Administration. The 1940 total was 294.3 billion vehicle-miles.

More concretely, the long-term expansion of highway traffic may be illustrated by the fact that on a ton-mile basis trucks now haul about a sixth as much freight as the railroads, and on a passenger-mile basis, travel on busses and on railroads is about equal.

As the national defense program gains momentum, still greater traffic volumes are certain.

And as traffic increases, accidents also increase. The President points out in a proclamation August 18, 1941:

"Traffic accidents alone caused 34,500 deaths in 1940, and thus far in the present year there has been an increase of 17 percent in traffic fatalities."

It seems to be more than a coincidence that this increase in traffic fatalities exactly corresponds to the increase in traffic on State highways.

On the basis of these facts, traffic engineers have three definite obligations before them:

(1) To take all possible steps to reduce traffic accidents.

(2) To collaborate in redesigning sections of the strategic network that are critically weak, in order to facilitate the flow of defense traffic.

(3) To cooperate in relieving the congestion of civilian traffic and in routing and escorting army convoys.

The strategic network of routes of principal military importance includes approximately 78,000 miles of highway. In this mileage there are presently over 5,000 miles of surface less than 18 feet in width; there are nearly 2,500 bridges of capacity of less than 30,000 pounds; and there are approximately 14,000 miles of road whose surface is incapable of supporting wheel loads of 9,000 pounds.

Furthermore, there is a substantial mileage which is over 18 feet in width, but is still narrower than necessary for the proper accommodation of present and expected civilian and military traffic; and there is a common condition of narrow shoulders, and a very general condition of excessive curvature, too steep grades, and inadequate sight distances.

While efforts are being made to remedy the most critical of these deficiencies, there is no prospect of a general conditioning of our main highways to make them fully adequate. Our worst traffic situations are on the main routes through metropolitan areas. Solutions are possible only through large projects at tremendous cost and such work must be deferred until the conclusion of the defense program.

The seriousness of present traffic conditions must not be discounted. With the increasing subcontracting of many items of manufacture, and with many larger plants becoming principally assembly centers, the highway becomes an integral feature of

the assembly line. Stagnation of traffic under these conditions may well result in calamity. This reveals the necessity for traffic engineers to provide for the greatest possible organization of traffic flow.

Cooperation of traffic engineers in planning convoy movements during the training maneuvers now in progress is especially important. Military and civilian traffic is increasing steadily, and unless traffic engineers can organize traffic so as to provide for the expeditious movements of military vehicles, it may become necessary in the event of larger and more important moves in the future for the army to take over temporarily certain highways or sections of highways.

Military and defense traffic must be moved promptly. Our road system cannot now reasonably provide for both military and civilian needs without careful organization and control of the traffic flow.

TRAFFIC ENGINEERING IN HIGHWAY DEPARTMENTS

THOMAS H. MACDONALD, *Commissioner,*
U. S. Public Roads Administration

THE traffic engineer of a highway department is the operating official responsible for the direction and control of vehicular traffic moving over the facilities supervised by the department. His problems are threefold: (1) To prepare traffic regulations and design control devices that will permit effective and safe uses of the facilities provided; (2) to educate the driving public in observance of the regulations; and (3) to consult with and advise the designing engineers of the operating characteristics of highway users.

In the short span of two decades traffic engineering has become a necessary divisional function of progressive State highway departments. Neither the regulations devised nor the tools with which the traffic engineer is concerned have become stabilized. The idiosyncrasies of the individual driver and the development of equipment for establishing these idiosyncrasies in terms and measures of time and space are the dual problems that have to be solved. The results must be shaped to provide the working tools of the engineers of plans and designs.

The cooperation of the traffic engineer with the design engineer in matters of alinement and dimensional design should be analogous to that of the materials engineer in the coordination of basic materials to serve the requirements of the structure. Just as the testing engineer passes on the adequacy of materials, so must the traffic engineer pass on the adequacy of the completed plan as a proper design for the traffic that it is anticipated will move over the completed highway.

The fundamental information essential to the control of today's traffic is equally essential to the design of tomorrow's new facilities. The operations job of the traffic engineer is to provide essential data on moving traffic and the effect of physical features on the behavior of the moving stream of traffic.

The foreseeable future will bring greater emphasis on the problem of traffic movements into, through and around cities. Improved vehicles and increased traffic under the impact of defense requirements may require revolutionary advances in design policies. The traffic engineer must be equipped to assist in shaping these policies.

HIGHWAY OFFICIALS AND TRAFFIC ENGINEERS

J. S. WILLIAMSON, *President,*
American Association of State Highway Officials

THERE has always been a natural tendency for officials of state highway departments to think primarily about the problems of providing adequate roadbeds for motor vehicles. This followed the earliest movements to build all weather surfaces and the major cry for more miles of better roads. As traffic has increased, there has been developed a tendency for the same officials to think more and more about problems of operation.

Present day affairs involving troop concentrations, a multifold increase in motor vehicle use coherent with military and civilian transport, new and greatly expanded industrial developments, the supplementing and replacement of founder transport facilities with automobiles, and other basic transportation matters are causing highway officials to focus attention on traffic engineering. All of these developments, creating more extensive use of motor vehicles, are reminding us of our huge responsibility in the operation of highway transportation systems. The factors are not new, but the results they are producing, measured in terms of congestion and accidents, are unprecedented.

We are specializing in the various branches of our highway profession to better provide structures, maintenance, and operation facilities which will permit the most efficient and the safest automobile travel possible — not just today, but for many years to come.

At the annual meeting of the American Association of State Highway Officials last year the Executive Committee recognized the timely importance and possibilities of traffic engineering. The Association's Committee on Traffic Engineering, which had been a sub-committee on administration, was given the status of a full working committee. It now has the same prestige and authority as is vested in any of the committees.

Realizing a close relationship between traffic engineering and highway planning, the committee's title was changed to "Committee on Planning and Traffic Engineering," and its membership was strengthened by the addition of several planning officials. Traffic engineering and highway planning are so bound together in the affairs of most highway departments that it is not possible to keep them apart. The Association is looking forward to this committee, with its broad interests and functions, to render a key service in highway transportation plans. Most of the committee members are also members of the Institute of Traffic Engineers, thus automatically providing for closer coordination of traffic engineering aims.

The rapid advancement of traffic engineering in state highway departments speaks for itself. This specialized engineering function is serving as one of the components in the operation of one of our most important land transport facilities. Highway officials realize that the characteristics of automotive transportation are sensitive to rapidly changing conditions and circumstances, and that to keep them near the crest of efficiency, they must be constantly watched and expertly regulated. It is imperative that this development be given the strong support of our highway leaders.

Traffic engineering has passed through the stage of incubation. Its worth has been proved, and it is sure to become an essential part of highway departments.

PRIORITY FOR TRAFFIC ENGINEERING

NORMAN DAMON, *Director*

Automotive Safety Foundation

WORLD WAR II may well give the impetus—it has already provided the opportunity—for traffic engineering to perform the service, and receive the recognition, that highway engineering achieved following World War I.

Major outlines of the defense traffic problem and the policies under which it must be solved begin to emerge.

In a recent talk Commissioner of Public Roads, T. H. MacDonald succinctly stated the problem:

". . . with the increasing subcontracting of many items of manufacture, and with many larger plants becoming principally assembly centers, the highway becomes an integral feature of the assembly line. Stagnation of traffic under these conditions might well result in calamity. These conditions in varying degree existed before the emergency. They will still be with us, should the emergency pass tomorrow. So even as the emergency serves to spotlight our deficiencies, it reveals with equal brilliance the necessity for the greatest possible organization of traffic flow . . ."

Efficient production is vital to swift and total national defense.

Equally the efficiency of highway transportation is in turn a critical factor in efficient production.

In a quickly broadening concept of the role of highway transportation in national defense exists the greatest opportunity to date for the traffic engineer, for he is chiefly concerned with securing a swift and efficient flow of traffic involving not only traffic engineering but all the other agencies for accident reduction and facilitation of traffic.

Nearly four years ago, E. W. James, Chief, Division Highway Transport, of the then Bureau of Public Roads, prophetically emphasized the growing need for expanded highway transportation management:

"The general accident record incident to motor transport and the consequent losses in life and property are clear evidence that highway transport today is neither as safe nor efficient as it should be, nor as it probably can be made. If we turn to marine, rail or air communication, we find that certain auxiliary services have grown with the development of each of these major forms of transport, and the number and magnitude of these activities are impressive.

". . . we are slowly coming to an agreement that certain corresponding auxiliary services are necessary for the safe and efficient operation of highway transport."

With defense needs spurring us we are today closer to recognizing the need for the coordinated "operating control" Mr. James outlined.

Accident records and analysis, driver examination and licensing, adequate roadbed facilities, street and highway police patrols, vehicle inspection, uniform rules of the road, and traffic engineering—these and many other activities already make up our highway traffic control system in varying degree of use and effectiveness throughout the forty-eight states. By comparison with the centralized administration of other systems of transportation they fall short indeed of full coordination toward the objective of safe and efficient highway transportation.

Today defense must come first.

National policy has recently been clarified with the official declaration that:

"Every available man and machine must be employed on direct defense requirements or at work essential to the civilian economy."

Traffic engineering meets that specification.

Increasingly the traffic engineer is called on to help expedite the flow of men and materials to and from defense plants over our highways, to facilitate military movements, to step up the efficiency of our whole productive effort as well as stabilizing our normal economy and morale through one thing —greater safety and efficiency in highway transportation.

For defense work the automotive industry has recently been training men by the tens of thousands. But for many years before the present emergency the industry has given concrete evidence of its belief in the need for trained men for traffic control through encouraging and aiding traffic engineering training at the Bureau for Street Traffic Research. It has supported and encouraged the widest possible application of traffic engineering principles.

Following the current emergency we may logically expect to see renewed efforts in this direction. We shall then find ourselves in need of the maximum possible service from our highway transportation system if we are to maintain a high standard of living. Rapidly as the nation has adopted an automotive standard of living, defense is giving a still sharper spur to more effective utilization of these vital facilities.

What we do now to serve national defense by more effective highway use also serves well for post-defense living.

A ROADBUILDER SPEAKS

CHARLES M. UPHAM, *Engineer-Director, American Roadbuilders' Association*

CONSTRUCTION, maintenance and operation—these are the three major stages with which today's highway department must concern itself. The first two activities have long been recognized. The third is a comparatively recent development; but it has been making remarkable and valuable progress in the past few years. It is the province of the traffic engineer. His twofold responsibility is the relief of congestion or facilitation of traffic movement and the provision of the safest possible operating conditions. To most effectively achieve these aims, the traffic engineer and the road builder must work hand in hand.

It is not enough for the traffic expert to enter the picture after the builder's work is ended. Since better, safer roads are their common aim, the traffic engineer might well act in an advisory capacity on design, construction and maintenance policies. While the real work of the traffic engineer begins with completion of the roadway surface, his problem can be simplified or made complex by the way that the man who designs or builds the road does his job. The good of the general public can best be served through co-operation of the two.

The past decade has brought great increases in the number of vehicles and the mileage that they travel. Prognosticators say that the next 10 years will see even more amazing developments. To keep this steadily rising stream of cars moving swiftly and safely over the highways means inten-

sified work for the traffic engineer. Engineering is not generally regarded as a business. It is usually and correctly considered a profession. The "business of engineering" is, however, fast becoming of increasing importance to the engineer of today and tomorrow. This does not mean that ethics and professional standards are less important than in the past, but engineering precepts must, of necessity, take into consideration the business of building roads and the bigger business that road building affects.

Planning and traffic studies play an important part in the determination of the business side of engineering. It must be admitted that, taking into consideration the load to be carried, traffic density around cities and the economic service that must be rendered, the nation has made such little real road progress that the most important stages are still reserved for the future. Ever-present to challenge the traffic engineer are the immediate needs that tie him to a limited course and his realization of the importance of making adequate plans for the future. It is up to him to work out a plan whereby the present can be taken care of without neglecting the future.

Highway transportation today plays a vital role in the preparedness program. Here again the traffic engineer must join forces with the road builder to expedite the movement of troops and supplies as an essential contribution to the nation's defense efforts.

RELATION OF TRAFFIC TO PLANNING

EARLE S. DRAPER, *President*,
American Institute of Planners

COMMUNICATION comes early in planning procedure. No sooner are natural resources located and points of concentration decided upon than the question of the transportation of people and goods from origin to destination and the circulation within the terminal district becomes of primary importance.

Local and state legislation outlining the duties of Planning Commissions usually place "desirable streets, highways, street grades, bridges, tunnels, approaches to bridges and tunnels, viaducts, parks and parkways" at the head of the list of items to be shown on the Master Plan.

If streets are of primary importance, then any plans of "desirable" ways for freewheel motor transport must consider the traffic aspects.

Traffic engineering, as the planner views it, concerns itself with providing a safe and expeditious means of moving people and goods. It approaches the problem from an operating rather than a planning point of view. Planning must consider this operating aspect as an important part of the planning-action program. Traffic Engineering then is a function of traffic planning, which in turn is an essential part of thoroughfare planning as a part of the Master Plan.

Both planner and traffic engineer have a mutual interest in the circulation system. The difference lies in the approach. The planner approaches the circulation system from the standpoint of serving the needs of the land use pattern. He thinks of each street or road as a channel, interrupted at intersections by "valves"; and throughout the region or city he sees a *system* of channels affording complete circulation. The traffic engineer on the other hand, begins with those elements of the travelled way which affect driver operation of the motor vehicle.

In the early 20's when the unprecedented growth in numbers and mileage of motor vehicles and the consequent increase of traffic congestion and accidents created the need for a scientific attack upon this problem, many planners and engineers began to specialize in traffic.

The fact-finding studies and research completed during the 20's and 30's have been invaluable in preparing the street and highway plans of the present.

By the middle 20's the City of Pittsburgh and the State Highway Department of Ohio saw fit to employ technicians to develop traffic control regulations and devices and to work with the police, motor vehicle administrators and safety engineers.

It soon became evident that problems at isolated locations could, in many cases, be improved by consideration of the roadway system as a whole; and the farsighted plans previously made by the planners were given emphasis and impetus. Changes made by straightening, widening, extending and opening of other streets and the provision of new streets, limited-access ways, freeways, and parkways changed the earlier inadequate traffic pattern and accident experience at the former locations.

The traffic engineer and planner have a mutual interest and common bond in the location, design and character of the travelled way. With the traffic engineers' specialized knowledge of driver reactions to road design elements such as alignment, obstructions, lane and roadway widths, and roadside character, the planner is aided in planning the type of facility best suited to the particular land usages being platted and designed.

As time goes on and the Traffic Engineer and the Planner learn more concerning each others' function in providing a functional system of free-wheel transportation, the sympathetic appreciation which has already developed for each others' contributions will still further assist in meeting troublesome situations.

The most vexatious problem city planners have to face is how best to meet the everyday varied needs of city and metropolitan transportation and still preserve livableness of large urban residential neighborhoods. One likes the morning cream delivered to one's doorstep but dislikes to be awakened at four A.M. by the rumbling of a milk truck! A steady stream of through traffic is not only disturbing to residential neighborhoods but is a very real factor in breaking up those community activities that are so essential if people are to live together and not merely reside in a given area.

In my opinion too many concessions to speed and direction in our cities have already been made by planners. If community living is to be preserved and if neighborhood areas in cities are to be sufficiently livable as to attract and hold tax paying residents, the time has come for our cities to pay attention to limiting traffic uses of city streets. First by design and construction and second by regulation, traffic arteries must be kept for traffic use and divorced from lot frontage benefits; all other streets—the great majority of the network of passageways in the city—must be in the same way devoted to only such uses as are needed by the abutting residents and contribute to individual welfare and neighborhood living. Too great stress cannot be laid on the necessity of solving this problem if our cities are to continue to have a proper balance of residential occupancy in relation to business and industry. Solving this problem will do much to prevent the economic and social bankruptcy of our cities.

RELATIONSHIP OF MOTOR VEHICLE ADMINISTRATION TO TRAFFIC ENGINEERING

A. W. BOHLEN, *President*
American Association of Motor Vehicle Administrators

THERE has never been a greater need for complete cooperation between all agencies working on matters of motor vehicle transportation. The use of automobiles must be extended and expedited with a minimum loss of lives and property; there must be a maximum of efficiency and safety. Only by careful planning and coordination of our efforts, so that a unified endeavor will result, can we accomplish these requirements.

The American Association of Motor Vehicle Administrators has always been a strong sponsor of traffic engineering. Since the inception of this relatively new profession, the Association has given its strong support and has contributed as it was able to its development and success. Today we are still as anxious as ever to work with and promote the traffic engineering profession. Whether this is done through our national organizations, the American Association of Motor Vehicle Administrators and the Institute of Traffic Engineers, whether it is accomplished through close relationship of state departments or individuals, or by whatever manner or means, much good can come from our united efforts. With the backing of the country's leaders, motor vehicle and driver control and traffic control techniques can be developed to a point where favorable results will have to follow.

The necessity for a close working relationship is not new, but the need for quick accomplishment of traffic and safety aims has been accentuated by national defense activities. Numerous instances could be cited wherein our interests and aims have paralleled. One of the latest is the nationwide truck and bus inventory for national defense. We must work with the U. S. Public Roads Administration, the Work Projects Administration, and the War Department in compiling records of publicly and privately owned buses, trucks, truck-tractors, truck trailers and semi-trailers, so that the location of these vehicles and the ease of their procurement for national emergencies can be readily determined. You will use the records to formulate plans for evacuations, maintenance of roadways, movements of supplies, and for other important transportation purposes. In this case, as in most important transport matters, not one organization, not one agency, is involved; local and national, public and private, large and small, as well as untrained and technical groups, are involved alike.

State governments and the organization of state departments vary so widely that it is not possible to say just how formal relationships can or should be established. The methods are of little importance, the thing that matters most is that all sights are turned on the same target.

The interest of officials of motor vehicle departments in traffic engineering is evidenced by the fact that a number of them have their own traffic engineering organizations. In others, a close relationship exists so that all primary aims and objectives are achieved smoothly and effectively. Traffic engineers have proved that they can be of invaluable assistance to motor vehicle administrators in their work on accident records, safety, and mechanical control of drivers. Add enforcement to these, and the essential E's result! Drivers, vehicles and roadways are controlled.

EMERGENCY——

EARL J. REEDER, *Chief Traffic Engineer*
National Safety Council

THE traffic accident emergency presents at least four important problems to the traffic engineer. These are increasing the toll of life and limb in traffic and are hampering the production program in the defense emergency.

There is a marked increase in vehicular traffic.

The increase in night traffic is disproportionately large because of more night shifts in industry and more night transportation.

Many new commercial drivers are being employed and greater use is being made of private passenger cars for transportation to new industrial centers.

There is a marked increase in pedestrian traffic, particularly around new industrial centers.

These emergency conditions are more highly concentrated at some places that at others. Every traffic engineer should make special studies of the extent of the concentration of these problems in his own jurisdiction, so that he can apply the appropriate remedies in whatever concentrated form is necessary to handle the problems. While one may say that this emergency requires more of the same kind of activities that have been carried on, an important engineering problem now is to find out those in which special activities are required to deal with special concentrations of the problem.

The following are some of the activities that are likely to need special attention in most areas where preparations for defense have affected the traffic accident problem:

Capacity use of roads where traffic is concentrated requires uniform movement of vehicles with few passing or being passed. Speed zoning and timing of existing traffic signal systems for most efficient speeds are among the possible solutions in many cases. As fall and winter approach and darkness enters the peak traffic hours, special night speed limits for zones may become necessary.

Increased traffic and new drivers makes greater certainty of sign and signal indications necessary. The Traffic Engineer should be sure that the view of such control equipment is unobstructed and that it is in proper condition to be seen readily both day and night. Indications that are unmistakable often keep free moving capacity traffic from becoming quickly congested.

Adequate sidewalks and street highway lighting should be provided in the development of any new industrial area or other section where pedestrian traffic will be an important factor. Emergency construction and development often omit necessary safeguards that are not considered essentials of moving traffic and find their need emphasized by injury or death to forgotten drivers and pedestrians, particularly the latter.

Parking places off the road are particularly necessary where large groups of drivers must congregate. Every new industrial development should have proper facilities for parking off the road to accommodate the motorists whose activities center there.

The traffic engineer should be particularly concerned with the informing of the public about the improvements that he is making to meet the traffic accident emergency. He should see that this information gets especially to the classes of people who are most vitally concerned, through prop-

er selectivity in the educational program that is carried on.

Although as engineers we have prided ourselves on the selectivity that we have exercised in attacking the traffic problem, the need for selectivity is now greater than ever. It isn't possible to do everything everywhere that we may desire, but the President's Proclamation concerning the national accident emergency does call upon us to identify the special problems that are accounting for the marked increase in traffic accidents and apply our remedies there.

"SWEAT, TOIL AND TEARS"

DONALD S. LEONARD, *President,*

International Association of Chiefs of Police

PRACTICALLY every article, editorial and speech these days on the subject of our national emergency contains at least one "never before in this country," "at no time in our history," or "the need is greater than ever."

This will be no exception. As the year rolls into the fall and winter season, it appears that nothing short of a miracle can keep the U. S. traffic death toll from reaching an all-time high of approximately 40,000 in 1941. In addition to those killed outright, there will be approximately 1,750,000 persons injured—many of them permanently—and the property damage figure will reach the breath-taking total of $2,500,000,000. Additional waste of money and effort from traffic delays caused by accidents is beyond estimate.

It follows then that there has never been such a need—yes, a demand—for close coordination of forces in traffic engineering, education and enforcement. Never has there been such a need or demand for more traffic engineering improvements, stricter enforcement, sounder education.

With more motor vehicles on the streets and highways than ever before, with more drivers and pedestrians, with the thousand and one traffic problems that have sprung from national defense activities, the present emergency is a direct challenge to the ingenuity and resourcefulness of every man in the traffic control and accident prevention field.

Can we meet this challenge? Can we pass this acid test? Or will we have to retreat from a traffic Dunkirk, salvaging only remnants of our practices and theories?

I believe we have what it takes. I believe the combined efforts and energies of traffic engineers, traffic safety educators and law enforcement officers can hold the ground already gained and launch a new and more determined offensive against accidents.

It will mean digging in—and deep. It will mean harder work than any of us has ever put in before. It will mean —and I apologize to Mr. Churchill— sweat, toil and maybe a few tears. This is what lies ahead for us in the national defense program.

President Roosevelt has called for unity. As a nation, we must pull together to survive. As professional men in the traffic control field, we too must unite to combat our common problems.

The smooth, safe flow of traffic is our responsibility—in times of peace and in times of national emergency. We must not shirk that responsibility because the job is tougher.

CASE HISTORIES AND THE TRAFFIC ENGINEER

C. J. TILDEN, *President*,
Eno Foundation Highway Traffic Control, Inc.

"TWO New York residents were instantly killed and another was seriously injured this afternoon in a two-car accident at the junction of routes 68 and 69. One car entered the intersection and crossed into the path of the other car."

"Five persons en route to Sunday School were killed today when an eastbound Southern Railway freight train struck their automobile."

"In Staten Island three young men were killed and another seriously injured when the automobile in which they were riding crashed into the rear of a milk truck. The accident occurred at 4:15 A.M."

(A man of 56) "was killed today by a hit-and-run driver early in the morning while he was walking along a road near his home. His body was found on the road by his nephew."

These are direct quotations from newspaper stories, all printed during this present summer of 1941. Eleven violent deaths and two serious injuries. And they are but four examples of scores of similar happenings throughout the country every day.

One outstanding feature, common to practically all such accidents, is that they are preventable, and consequently, unnecessary. Of course, there is generally no single condition which may be assigned as the sole cause of a fatal accident on the highway. In most cases several contributing causes may be noted. Three factors are always present—the car, the operator and the highway. Sometimes one of these is a major cause, sometimes another. Not infrequently two or even all three are more or less to blame.

In nearly every story of a fatal highway accident there is a definite message for the traffic engineer. In the first one cited above, for example, one car crossed into the path of the other. This could probably be prevented by a carefully planned barrier of some sort, depending on the nature of the intersection, which would effectively prevent the sort of thing that happened. It is distinctly a planning job for the traffic engineer, to be carried out after a careful survey of the physical conditions.

The second example is the well-known railway grade crossing problem. The elimination of grade crossings following the extensive government program is progressing slowly throughout the country. We still have, however, a long ways to go. The elimination of such a crossing is generally an expensive proposition, whether it is done by relocation of the highway, relocation of the railway, or separation of the grades. There is, however, not nearly enough use made of effective protection at such crossings. Signal lights and bells automatically operated by the trains are helpful but there are a number of partial barrier devices, very inexpensive, which may be used on the highway on either side of the railway to compel the motorist to slow down and consequently use more care. These should be used far more generally than is now the case.

Number three above was the result of a rear-end collision in the early morning at the end of August. It is possible to conceive a number of contributing causes—recklessly high speed is certainly indicated, possibly drunken driving, insufficient illumination, etc. The thought is at once suggested to the traffic engineer, however, that wider shoulders or other provision which would let the milk truck pull off to the side, well out of the way of

passing travel, would have prevented the accident.

Similarly number four flashes a very definite message to the traffic engineer. Sidewalks should be provided far more generally than they are at present. Even a rough and inexpensive footpath is effective provided it is kept well away from the road pavement, preferably with a line of trees between it and the vehicular way.

It would seem as though these individual stories of fatal accidents could be studied and used much more generally than is now the practice. In a great many cases the remedy is simple and inexpensive, especially if any considerable value is put on human life as it should be. A definite study of conditions which have led to a fatality will of course tend to point the way to improving physical conditions at which fatal accidents might happen. In any case these accident records, which are all too frequent now, would seem to be a valuable source of important information for the traffic engineer.

HELP DEFENSE — STOP ACCIDENTS

THE President of the United States signed a proclamation, attested to by Secretary of State, on August 18th, calling attention to the rapidly rising accident toll and the manner in which this huge loss of life and property was hindering national defense. In his proclamation the President called upon the National Safety Council to enlist everyone in a concerted campaign against accidents.

In order to carry out the President's request, the National Safety Council has contacted approximately 120 national organizations and has received the pledge of support from them. An initial meeting was held in the Pennsylvania Hotel in New York City on Tuesday, September 9th. 140 persons were present, representing approximately 100 national organizations.

The Institute of Traffic Engineers, through its President, Hawley S. Simpson, has pledged its cooperation with this movement and appointed W. Graham Cole, Secretary-Treasurer, to represent the Institute at the meeting. A number of other I.T.E. members were present as representatives of various national organizations. The meeting was opened by John Stilwell, President of the National Safety Council, and an address regarding the need of cooperation in a special safety effort was presented by Leslie J. Sorenson, Vice-President for Public Safety of the National Safety Council and a member of the Board of Direction of the Institute of Traffic Engineers.

At the opening session there were present representatives of Industry, Transportation, Home and Farm, and Public Information. Mr. Thomas H. MacDonald, Commissioner, U. S. Public Roads Administration, has been chosen chairman of the Traffic and Transportation Committee. Meetings of each of these groups were held and tentative reports submitted in the afternoon. A Resolutions Committee headed by Leslie Sorenson as Chairman, presented the following resolution which was adopted.

WHEREAS, the Nation is confronted with a rapidly rising accident toll, and

WHEREAS, the President of the United States has recognized these accidents as a definite threat to our defense program, and has called upon the

National Safety Council to lead a concerted and intensified campaign against accidents, and

WHEREAS, he has called upon all citizens to enlist in this campaign:

THEREFORE, we, the participants in this Emergency Safety Conference, hereby accept the call to service as a patriotic privilege and enlist in this war on accidents—"for the duration." We will carry on the fight until victory is achieved and the inexcusable waste of human and material resources through accidents is stopped.

To aid in the fulfillment of this pledge, the Conference has developed a program of specific emergency measures of accident control for recommended adoption by all National organizations and agencies.

It is our united purpose to do our utmost in carrying out the plans set forth in these programs, and, from time to time, to advise the National Safety Council of our progress, so that the President may be kept informed on the results of the campaign.

We also go on record as believing, with the President, that the campaign for greater safety can succeed only through the interest of "every citizen, in public or private capacity," and we urge that every organization and every agency join with those represented at this Conference in an intensified effort to help defense by stopping accidents.

Of outstanding interest to the traffic engineering profession was the fact that emphasis in the recommendations of the Traffic and Transportation group was given to the desirability of organizing and maintaining city and state traffic engineering departments, operated by competent traffic engineers provided with the necessary powers and appropriations.

Stress was placed upon conducting field studies in the light of potential troop movements and concentrations especially along main routes.

Public Works departments were urged to give special attention to streets serving defense industries and to see that street improvements were supported by traffic engineering devices to increase and protect flow of vehicles and pedestrians.

The emphasis was laid upon a concerted and coordinated attack stressing that all agencies together can do a great deal more than the sum total of each agency working alone.

A vigorous application of proved methods is the answer. Action is essential. This is not only the traffic engineer's opportunity to unroll his blueprints and demand action, but also his patriotic obligation.

"DEAR MARGIE"

By A. Fish Story

Monday Noon

Dear Margie:

I'll bet your suprised to get this letter from me on this office stationery. The story is I have me a job in the City Traffic Engineer's office while the regular secretary is on her vacation. That shows you that it was smarter for me to go to that night school rather than out to the movies and up to Central Park with those boy friends. Most times they dont get you anything in the long run anyway.

I suppose you'd like to here about this job. Well the professor in the night school says to me last week—— Mable, the City Traffic Engineers office asked me if we had a girl we could send over for a couple of weeks to fill in during the vacation period., and would like you to try it out as a little experience, because they only want some one to answer the phone and do a little typing. Of course I said O K

and I could use a little money for my winter coat that I was telling you about. So here I am. It looks like it is going to be an easy job for all I have done so far is to answer the phone and say that the boss will not be back untill after lunch. And here he is so I will close and write you more when I can.

Mable

Wednesday PM

Dear Margie

Was some body kidding me about the soft snap that I thought I was going to have. You can say that over again. This place must be where they got the idea for Bedlam Hotel. What a Madhouse. That telephone has been ringing every minute I'm in the office. And the questions that I have to answer. For instance - is the City Traffic Engineer in? And when I say no. Then this is Mrs. Jones at such and such a number 12th st. When am I going to get that yellow paint for my driveway, the people working in the plant are parking there all day long and I cant get in or out. Or maybe its some one else who wants some of those signs they put up, or someone things ther ought to be a white line down the middle of some street. The best one yet was the fellow who called up and wanted to know whey the traffic light on the boulevard was always red when he hit that corner on his way to work. I says to him in a nice way that maybe it was because he was always too late and he should get up earlier in the mornings. I guess he didnt thing that was right for he hung up right in my ear. Some men dont know how to treat a lady.

Well anyway that the way it has been going and when I asked the boss how come so many people wanted to know about these things he says to me. Mable, there are loo,ooo people in this town and when their not walking their riding and our job is to see that they can get from one part of town to another without getting in a smashup and as far as they are concerned without wasting any time. The only trouble is that some of them never learned to walk or how to drive, and in spite of all we are going they start to go some place and wind up in the hospital or the undertakers. Now that I think of it I can see what he is up against and he sure has my deepest sympathy, of course in a plutonic way.

Well thats all for this time, so will close with my best,

Mable

Friday noon

Dear Margie:

Gosh am I going to have a nervous breakdown or something. The boss came in today and said I would have to type out a report for some planning commission or another that he was also engineer for. And that there was to be a meeting of the board of accident review which brings in all of the city drivers who have had accidents and finds out what causes them and that he had a meeting with the Chamber of Commerce traffic committee about some by-pass route. I really dont know how he handles all them things. He's got more jobs than Carter has pills. Anyway I get busy and write out all of the things that he gives me and I bring them in to him just before noontime. He looks them over for quite a while and soon he has me worried. I says to him arent they O K. He says to me, dont worry girlie they'll be allright, as a matter of fact when the committees look at this job of typing they will probably find the answer to all of their complaints about the traffic situation not to mention their most recent beef about the traffic signall timing. Wasnt that sweet of him. There goes the five oclock whistle, will write again soon.

Love

Mabel

Monday Noon

Dear Margie

I was trying to think over the week end where I had heard about people only being expected to work a forty hour week. I asked the boss about it Saturday when I expected to be all caught up at noon and he said he had read the traffic engineers manual thru from cover to cover and it was never mentioned and so would i please come back and maybe with a little special effort I could get out some letters without offending Mr. Webster. When I asked him what department Mr. Webster worked in all he said was Forget it and run along to lunch and to remember that the red light is at the top of the signal on the corner but if I should forget the cop on the corner will remind me. Can you imagine that. Anyhow that afternoon I was back on the job on the button and meet the boss tearing down the stairs and he says to me Mable, just you be a good girl and watch the phone and dont break anything, and tell that assistant of mine when he comes in to meet me at Main St and the boulevard, that we just had word that the master controler is on the blink and there is hell to pay. Well I guess there was because later the boss called up and told me he wouldnt be back and for me to go hom to mama. So that's the way it goes around here. You cant well from one minute to the next where you are going to be. Thats all for this time will write you soon.

Mable

Friday afternoon

Dear Margie:

Well after a hectic two weeks my job is most over and I'll be going back to night school. The boss said it would be a smart idea and maybe some time I could work for him again. He seems to be in a pretty good humor after all of the meetings he has had to attend and the stuff he has had to do this week. First it was the Council caucus on a new traffic signal installation, then the planning commission on a new plan for opening up some street somewheres and then the street railway company on some new bus stops and then the retail merchants bureau on some parking restrictions and places for trucks to unload then to route some traffic around because the public works department was tearing up a busy street. To top it all off he had to plan for a truck convoy to get around the city because they had build the trucks too tall for some of our bridges. Anyway he comes in all smiles today and says girlie ther is a silver lining after all, the council said O K on the trip to the annual convention of the traffic engineers in Chi in October. If asked him if that was like the Legion conventions my older brother is always going to and if it was he better take along plenty of aspirin. He said no that these traffic engineers just met to gether to discuss the presbiterian control problems and how to handle bottlenecks and such things. Well I told him I cant see much difference except for the religious angle. He says O K Mable you win. Take a wire to Bill MacConoky, Flat wheel transit co Chi. Looking forward to a grate meeting. Hope the boys turn out 100 % for a well get together. Reserve one for me at the Stevens I'll be seeing you. And sign it Red Flasher. Then he said when you get that off you can call it a day and dont bother coming in tomorrow. Gosh I guess someone must have told him about that forty hour week afterall. Anyway i didn't mention it. I guess thats all for now. Will write you next week when I can get a typewriter at the night school.

Love

Mable

TRAFFIC ENGINEER'S HANDBOOK

The TRAFFIC ENGINEERING HANDBOOK is off the press! It is the first comprehensive technical treatment of traffic engineering ever published and is intended to supply the practicing traffic engineer and student with an authoritative reference work.

The magnitude and complexity of the traffic field renders impossible one individual or a small group of individuals having sufficient intimate knowledge of the technical and administrative phases of the field to exercise critical judgment of all aspects of current practice, engineering data and standards.

The Handbook represents the cooperative efforts of leading traffic administrators and many traffic specialists aided by criticisms and suggestions of authorities in related engineering and scientific fields and therefore provides reliable and accurate guidance on all problems of traffic engineering.

The editors beg to acknowledge their indebtedness for the services of the following nationally known traffic engineers who participated in the actual writing of complete sections of the Handbook: G. W. Barton, Director, Safety & Traffic Engineering Dept., Chicago Motor Club; W. C. Brandes, Traffic Signal Engineer, Chicago Bur. of Streets; H. F. Hammond, Director, Traffic Division Nat'l Conservation Bur.; H. F. Ilgner, Superintendent & Chief Engineer, Milwaukee Bur. of Electrical Service; B. W. Marsh, Director, Safety & Traffic Engineering Division, Am. Automobile Ass'n.; T. M. Matson, Assistant Professor in Transportation, Yale University; R. F. Michel, Junior Electrical Engineer, Chicago Division of Electrical Engineering; D. G. Mickle, Traffic Engineer, Detroit Traffic Engineering Bur.; R. A. Mitchell, Traffic Engineer, Philadelphia Traffic Engineering Division; W. R. McConochie, Traffic Engineer, Chicago Surface Lines; E. J. Reeder, Chief Traffic Engineer, Nat'l Safety Council; H. S. Simpson, Research Engineer, Am. Transit Ass'n.; L. J. Sorenson, Traffic Engineer, Chicago Bur. of Streets; A. H. Vey, State Traffic Engineer, N. J. State Motor Vehicle Dept.

Among others assisting in the preparation of certain portions of the text were: D. S. Berry, Traffic Engineer, Nat'l Safety Council; K. M. Reid, Illuminating Engineer, General Electric Co.; C. H. Rex, Special Representative, General Electric Co.; T. M. Forbes, formerly Research Assistant in Transportation, Yale University; and E. Allgaier, in charge of Driver *Re*search, Safety Dept. Am. Automobile Ass'n.

In addition, thirty-four well-known traffic engineers, of whom thirty-two are members of the Institute of Traffic Engineers, reviewed the text and pronounced it a scholarly achievement.

The TRAFFIC ENGINEERING HANDBOOK was co-edited by H. F. Hammond and L. J. Sorenson and is published jointly by the Institute of Traffic Engineers and the National Conservation Bureau.

The TRAFFIC ENGINEERING HANDBOOK comprises more than three hundred pages of text, tables, charts, formulae, diagrams and problems and is sturdily bound in a semi-flexible green cloth cover. There are 155 figures and 62 tables listed in the index, supplementing the many tables which are contained in the text itself.

Chapter headings are: The Vehicle, Vehicle Motion, The Driver, The Pedestrian, Traffic Accident Records and Indices, Traffic Studies and Surveys, Pavement Markings, Traffic Signs, Traffic Signals, Curb and Off-Street Parking, One-Way and Through

Streets, Roadway Design, Speed Restrictions, Islands and Loading Zones, and Street and Highway Traffic Lighting. There is an appendix on Traffic Signal Head Standard, and a cross-index of six pages.

The painstaking care with which the Handbook was prepared will make it the traffic engineers' "Bible" and from recent inquiries will have wide appeal among highway engineers, planners, police officials, motor vehicle administrators and engineering schools throughout the country.

It will be formally introduced to the engineering profession at the Twelfth Annual Convention of the I. T. E. in Chicago, October 4th-7th.

Send orders for the TRAFFIC ENGINEERING HANDBOOK to the Institute of Traffic Engineers, 60 John Street, New York, New York. The price of the Handbook is $3.25 (Members of the Institute of Traffic Engineers will receive complimentary copies.)

ORDER YOUR COPY NOW!

SEEING CHICAGO

By OTTO K. JELINEK

THIS October, Chicago will once again play host to the National Safety Council Convention. Chicago has all the advantages and few of the disadvantages of a large cosmopolitan city.

The city is covered with a network of fine boulevards and parkways. Each day thousands of workers are conveyed to and from the central business district via the most scenic routes in the Middle West.

The elevated system and the Illinois Central Suburban Lines are so designed as to rapidly transport large numbers of loop-bound workers without the inconvenience generally found in a service of this type.

Traffic Engineers, their families and friends attending the Convention will find that Chicago's transportation system affords excellent means for sightseeing and viewing the city's latest improvements in traffic control and street planning.

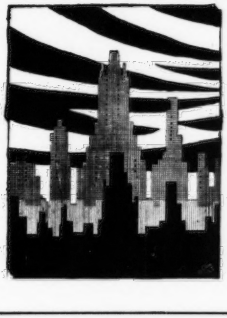
The ever increasing volume of traffic that daily travels over the boulevards of Chicago has been anticipated, and the construction program now in progress and near completion in Lincoln Park will adequately handle this contemplated increase in traffic volumes. As a point of interest, it is one spot that should be visited by all traffic engineers, as the method employed in handling traffic through Lincoln Park can be much better understood after it has been seen.

During the past few years innumerable separations have been constructed to provide safe access to limited highways; a large number of the major arteries through Chicago have been rehabilitated; the roadways widened; the proper traffic signals installed; and adequate pedestrian subways and passerelles have been provided.

Many new exhibits have been added to the Rosenwald Museum in Jackson Park. This museum is undoubtedly one of the most interesting institutions of its kind in the country.

The Academy of Science, Adler Planetarium, Art Institute, Historical Society, Field Museum, Oriental Society, and the Shedd Aquarium are places of great interest to visitors.

For those who would seek further recreation, the Municipal Airport, China Town, the Stock Exchange, the Board of Trade, the Stock Yards, and the Brookfield and Lincoln Park Zoos are conveniently reached on Chicago's transportation systems.



Stop, Look and Listen

NOMINEES FOR I.T.E. OFFICES

In accordance with Section II, Article 5 of the I.T.E. Constitution and By-Laws, the Nominating Committee, duly appointed by the Board of Direction, has submitted the following list of nominees for the Institute year starting October 1, 1941:

President:	D. Grant Mickle
Vice-President:	Harold F. Hammond
Secretary-Treasurer:	W. Graham Cole
Director:	Thomas J. Seburn
Director:	Arnold H. Vey

The election will take place at the Annual Meeting of members, which will be held at Chicago in October.

CONGRATULATIONS!

Mr. Guy Kelcey, Member of the I.T.E. has accepted the presidency of Vehicular Parking Ltd., 1060 Broad Street, Newark, New Jersey, a corporation that holds numerous patents covering parking meters and under which the principal manufacturers of the parking meter industry are licensed. In addition to administrative duties, Mr. Kelcey will be responsible for the orderly development of metered parking and for research and expansion into allied fields.

Mr. Kelcey's plans also include motor transport and traffic consultation. To this end, he has supplemented his own extensive experience by enlisting the cooperation and services of a group of engineers who are specialists in various phases of motor transport and traffic engineering. Thus he will make available to traffic and other interested officials a well rounded organization for the investigation and solution of their motor transport and traffic problems.

Mr. Kelcey was formerly affiliated with the Signal Service Corporation, serving in the capacity of sales manager since it was organized in 1931 and prior to that manager of the Traffic Engineering Division of the American Gas Accumulator Company with which Signal Service is associated.

HE'S IN THE ARMY NOW

Lieut. Edward G. Wetzel (Jun I.T.E.), formerly District Traffic Engineer for the State Highway Commission of Indiana, has been called into service with the Traffic Control Section, Engineer Board, c/o 4th Division Headquarters, Fort Benning, Ga.

Good luck, Ed.

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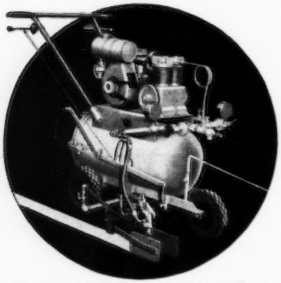
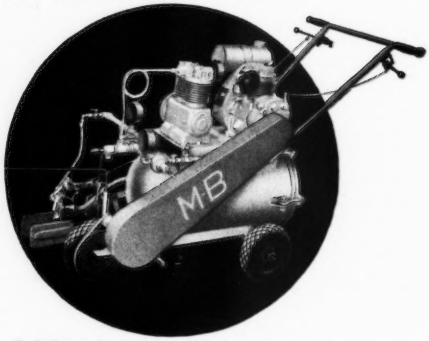
The M-B Automatic Marker (shown above) can handle EVERY type of traffic line marking job. Stripes center lines and "no passing" lines—single, double or triple—solid or intermittent—one color or two colors—in any desired combination—and it does the job accurately and safely. Assures uniform, clean-cut lines. No "mist." Saves 15% to 20% of material, compared to other methods of marking. Write for Bulletin No. 113.



Standard M-B Hand-Propelled Street Marker

STREET MARKERS

Compact, versatile machines for all types of traffic striping jobs: Center lines, parking areas, cross walks, safety zones, etc. Can also mark athletic fields, airports, tennis courts, playgrounds, etc. Quickly convertible to all-purpose paint sprayer. Easy, one man operation. Write for Bulletin No. 112.



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Program

Twelfth Annual Meeting

Institute of Traffic Engineers

OCTOBER 4-7, 1941

STEVENS HOTEL
Chicago, Illinois

SATURDAY AFTERNOON

October 4

Room 440-A

Presiding: HAWLEY S. SIMPSON
President, Institute of Traffic Engineers

1:30 P.M.—GENERAL MEETING—ALL COMMITTEE MEMBERS; ALL I.T.E. MEMBERS TO ATTEND

1:45 P.M.—BUSINESS MEETING OF ALL STANDING COMMITTEES
The place of each committee meeting will be announced at the General Meeting

7:30 P.M.—BOARD OF DIRECTION—Executive Session

SUNDAY AFTERNOON

October 5—2:00 P.M.

Room 440-A

Presiding: HAWLEY S. SIMPSON
President, Institute of Traffic Engineers

BUSINESS SESSION—FOR MEMBERS ONLY (ALL GRADES)

1. REFLECTIONS OF 1941—
   HAWLEY S. SIMPSON, President
2. INSTITUTE POLICIES—
   LESLIE J. SORENSON, Chairman, Policy Committee
3. A HANDBOOK FOR TRAFFIC ENGINEERS—
   HAROLD F. HAMMOND, Co-Editor "HANDBOOK"
4. DEVELOPING I.T.E. STANDARDS—
   WILLIAM C. BRANDES, Chairman, Standards and Specifications Committee
5. STREET LIGHTING AND TRAFFIC ENGINEERING—
   HOWARD F. ILGNER, Chairman, Street Lighting Committee
6. IMPROVING TRAFFIC ENGINEERING INSTRUCTION—
   ROGER L. MORRISON, Chairman, Traffic Engineering Training Committee
7. RESEARCH PROBLEMS—
   WILBUR S. SMITH, Chairman, Com. on Cooperative Engineering Research
8. I.T.E. INCOME AND EXPENSE—
   NATHAN CHERNIACK, Budget and Auditing Committee
9. SINCE THE LAST ANNUAL MEETING—
   W. GRAHAM COLE, Secretary-Treasurer
10. REPORT OF NOMINATING COMMITTEE—
    WALTER F. ROSENWALD, Chairman, Nominating Committee
11. ELECTION OF OFFICERS
12. OTHER BUSINESS

MONDAY MORNING

October 6—8:30 A.M.

Third Floor, North Ballroom

BISCUIT BANTER BREAKFAST

Conducted under the Auspices of the Resolutions Committee

President of Disgruntled Farmers	LEW MCINTYRE
County Agent	CHARLIE REX
Fugitive from Farmers	BILL MCCONOCHIE

MONDAY MORNING

October 6—9:45 A.M.

Third Floor, North Assembly Hall

WHAT CAN TRAFFIC ENGINEERS CONTRIBUTE TO NATIONAL DEFENSE?

Presiding: GUY KELCEY

President, Vehicular Parking, Ltd., and Consulting Engineer, Newark, N. J.

1. MILITARY TRAFFIC ENGINEERING—WARREN S. EVERETT, Captain, Corps of Engineers, Assistant Executive Officer, The Engineer Board, Fort Belvoir, Virginia
2. TRAFFIC PROBLEMS CREATED BY BOMBINGS — EXPERIENCE IN ENGLAND—THOMAS ROCHESTER, Chief Engineer, New York City Police Department
3. EVALUATION OF NIGHT VISION TESTS—EARL ALLGAIER, Assoc. Personnel Technician, War Dept. & Consultant on Driver Research, American Automobile Assoc.

MONDAY AFTERNOON

October 6—2:00 P.M.

Third Floor, North Ballroom

JOINT SESSION WITH STREET AND HIGHWAY TRAFFIC, COMMERCIAL VEHICLE AND TRANSIT SECTIONS OF THE NATONAL SAFETY COUNCIL

Presiding: LESLIE J. SORENSON

City Traffic Engineer, City of Chicago

1. A STATE GOVERNMENT'S RESPONSIBILITY FOR SAFETY—HON. MURRAY D. VANWAGONER, Governor of Michigan
2. VALUE OF TRANSPORTATION COMPANY PARTICIPATION IN A COMMUNITY SAFETY PROGRAM—D. L. FUNNELL, General Superintendent of Transportation, Kansas City Public Service Company
3. A CITY GOVERNMENT'S RESPONSIBILITY FOR SAFETY—ROSS L. LOFFLER, Chairman, Better Traffic Committee of Pittsburgh

TUESDAY MORNING

October 7—9:00 A.M.

Third Floor, North Assembly Hall

JOINT SESSION WITH INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

TRAFFIC ENFORCEMENT AND TRAFFIC ENGINEERING

Presiding: LIEUT. FRANKLIN M. KREML
Director, International Association of Chiefs of Police, Evanston, Ill.

1. TRAFFIC ENGINEERING FUNCTIONS OF POLICE DEPARTMENTS IN SMALL CITIES—HAROLD F. HAMMOND, Director, Traffic Division, National Conservation Bureau, New York City
2. TRAFFIC DATA NECESSARY FOR SELECTIVE ENFORCEMENT PROGRAM—SGT. PAUL PRICE, Director, Accident Prevention Bureau, Dayton, O.
3. EFFECTIVENESS OF TRAFFIC ENGINEERING IMPROVEMENTS INCREASED BY PROPER ENFORCEMENT—T. ELMER TRANSEAU, Director, Bureau of Highway Safety, Harrisburg, Pennsylvania
4. SPEED ZONING ON RURAL HIGHWAYS—W. F. ROSENWALD, Traffic Engineer, Dept. of Highways, St. Paul, Minn., and FOSTER KUNZ, Traffic & Safety Engineer, State Road Commission, Utah.

TUESDAY AFTERNOON

October 7—2:00 P.M.

Third Floor, North Assembly Hall

TRAFFIC AND PLANNING

Presiding: FRED W. FISCH
Director, Bureau of Traffic and City Planning, Schenectady, N. Y.

1. CONTROL OF ACCESS FROM ABUTTING PROPERTY DEVELOPMENTS—HALLIE MYERS, Director of Traffic, Indiana State Highway Commission, Indianapolis
2. PREVENTION OF DECENTRALIZATION THROUGH PROVISION OF ADEQUATE TERMINAL FACILITIES AS PART OF URBAN REHABILITATION—THEO. T. MCCROSKY, Executive Director, Planning Commission, Chicago, Ill.
3. EFFECT OF DECENTRALIZATION ON URBAN TRAFFIC PROBLEMS—D. GRANT MICKLE, Traffic Engineer, Traffic Engineering Bureau, Detroit, Mich.
4. Film—KNOW YOUR MONEY—Produced by the United States Treasury Dept.

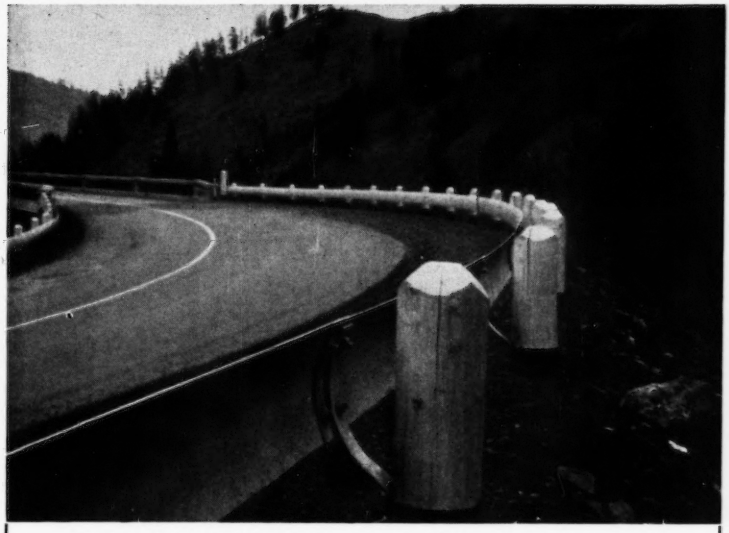
ANNUAL DINNER

Tuesday Evening, October 7—7:00 P.M.

Boulevard Room

Presiding: HAWLEY S. SIMPSON
President, Institute of Traffic Engineers; Research Engineer, American Transit Association

TUTHILL HIGHWAY GUARD RAIL



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THE F.P.A. RIDES AGAIN!

The Farmers' Protective Association rides again at the FOURTH ANNUAL BISCUIT BANTER BREAKFAST.

Who will they ride? Will it be you, or you, or *you?* Probably all three. But not poor, innocent Paul Green we hope. Will the ghost of Paul's effigy haunt the festive board? Be there and see.

Lew McIntyre, president of the F.P.A., appeals to all Farmers to re-learn all lines they were so cruelly denied the privilege of reciting last year. The Farmer's daughter may be at the Breakfast, and where would you be without a line?

Charlie Rex has been appointed County Agent to do the work that Chairman Bill McConochie is trying to duck. He asks those who plan to attend to bring well-behaved chickens, small bulls, or other rural impediments to give an air of reality to the event.

There *will* be a *Breakfast* Monday morning, October 5. The eggs will be better, the hams will be bigger. Be there to defend yourself, or the F.P.A. will ride *you?*

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APPLICATION FOR TRANSFER IN MEMBERSHIP—I.T.E.

Edward John Baummel, Jr. (Jun.)
Traffic Engineer, 6628 S. Fairfield Avenue, Chicago, Illinois.

Carl E. Fritts (Assoc.)
Traffic Engineer, Department of Highways, Olympia, Washington.

Leslie Williams (Jun.)
Director, Civic Planning & Traffic Board, Chamber of Commerce, Providence, Rhode Island.

NEW MEMBERSHIP APPLICATIONS—I.T.E.

James King Gibson
Research Assistant, Research Department, New Orleans (Louisiana) Public Service, Inc., 3026 St. Charles Avenue, New Orleans, Louisiana.

Joe Havenner
Traffic Division, Oregon State Highway Department, Salem, Oregon.

Alger F. Malo
Acting Traffic & Safety Engineer, Traffic & Safety Division, State Highway Department, Lansing, Michigan; (home address) 1614 Drexel Road, Lansing, Michigan.

Francis Marion Reynolds
Assistant Engineer, Survey & Plans; and District Traffic Engineer, Division of Highways, Sacramento, California; (home address) 2001 Van Ness Avenue, San Francisco, California.

FRAUD

The Postmaster General of the United States has forbidden the payment of any postal order drawn to the AMERICAN SOCIETY OF ENGINEERS: FRED GROSS, PRESIDENT, and has instructed all letters and other mail directed to said concern and party to be returned whether registered or not.

THE AMERICAN SOCIETY OF ENGINEERS has been judged to be engaged in obtaining money through the mails by false and fraudulent pretenses, representations and promises.

LOOKING AHEAD

October 4-7, Chicago, Ill.

12TH ANNUAL CONVENTION, INSTITUTE OF TRAFFIC ENGINEERS, Stevens Hotel.

October 6-10, Chicago, Ill.

30th National Safety Congress and Exposition, Stevens Hotel. W. H. Cameron, managing director, National Safety Council, 20 North Wacker Drive, Chicago, Ill.

October 26-29, New Orleans, La.

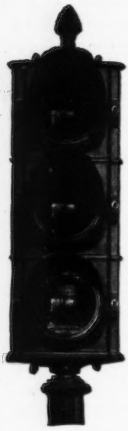
47th Annual Conference, American Public Works Association, Roosevelt Hotel.

TROLLEY COACHES

E. E. Kearns in an article entitled "The Popular Trolley Coach" (American City, Aug., 1941) states that people in Cleveland waited for the trolley coach when it followed a motor bus, that trolley buses speeded up service and increased patronage 25% in an eastern city and that banking institutions in western states are seeking the paper back of these new modernizations.

He attributes trolley coach popularity to absence of gasoline fumes, quietness of operation, smooth acceleration, riding and braking qualities, excellence of lighting, controlled electric heat and wide aisles. Transportation companies like them because of their ability to attract patronage and to operate at a very low overall cost in their proper field of service density.

ELECTRIC SIGNALS



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SHOW MUST GO ON—WHY?

In spite of the usual requests, the ITE Bittie Players will again clear the Boulevard Room of the Stevens Hotel with not one but TWO of their sweller-drammers at the ANNUAL BANQUET. Nobody knows what the shows are going to be about, including the impending authors, but it is hoped this situation will have changed before the final (police) whistle blows.

The soul-stirring plots are almost indescribable, since none exist, but it is rumored that Hawley Simpson, the Handbook, and the Yale Bureau will *not* be mentioned. Actual plans also being unmentionable, it is best not to mention them. Since ITE shows cannot be put on the air because of Federal Communications Commission ruling, you'll just have to be there to see it for yourself.

DO YOU KNOW?

Highways claim approximately 24 of the 53 billions of dollars invested in the transportation systems of this country.

In three years Hartford, Conn., has reduced night accidents 73% on 10 miles of main streets by using modern lighting methods.

Police officers of Norwalk, Conn., find that taking pictures of school children violating traffic laws and showing them later at school safety talk periods proves more effective than lecturing the pupils on their violations.

Aero-road signs, using letters 2 feet wide and 32 feet high, are to be painted on the Reno-Carson, Nevada, highway as an aid to flyers.

Tolls have been removed from 27 bridges in four states with the aid of Federal Government funds.

Iceland owns no railroads and motor vehicles are the chief means of transportation.

The Texas Department of Public Safety advises driving without shoes as a safety precaution. The cool air and the vibration of the pedal on the feet will help prevent falling asleep.

Kansas City, Kan., is establishing 6 municipal parking lots to serve shoppers and downtown office workers. Benefited property will pay 90% of the $120,000 cost of the improvement.

STRETCH A BRIDGE?

Is it possible to increase the traffic capacity of a bridge at night without changing its physical dimensions?

Mr. H. E. Mahan, Manager of the General Electric Illuminating Laboratory, Schenectady, N. Y., said before the Northeastern Regional Conference of the Illuminating Engineering Society at Hartford, Conn., that "the application of adequate illumination along a bridge structure increases the traffic flow capacity during the after-dark peak-load period. In other words, such illumination is equivalent to adding several feet to the width of the bridge pavement, at a small fraction of the cost of such additional width.

"The physical limitations of curbs, guard rails, vertical truss and suspension members and retaining walls impose an additional hazard as compared to the unrestricted portions of our highway system. . . . Unlighted bridge sections often constitute a bottleneck in traffic flow at night."

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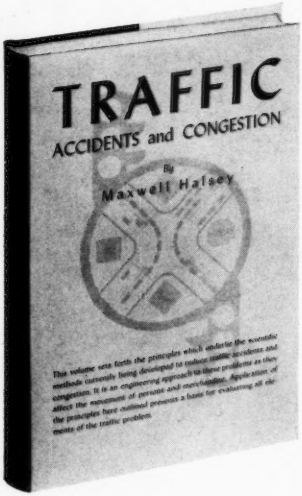

By MAXWELL HALSEY

Associate Director
Bureau of Street Traffic Research
Yale University

What is the function of the engineer in solving the traffic problem? How can a traffic engineering division be set up, and what should be its duties? What part does human ability play in creating a traffic problem? What important design remedies can be suggested to relieve traffic accidents and congestion? What is the most efficient way to attack the traffic problem? This book answers these and many other vital questions. It gets right down to fundamentals. No words are wasted, and the non-technical language makes it readily understandable. Only "traffic engineering" or "traffic planning" phases are dealt with, and whether an urban or a rural route is planned the principles given in this book will apply. Photographs of models or of actual traffic conditions are used profusely.

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TRAFFIC ENGINEERING HANDBOOK. Co-edited by H. F. Hammond and L. J. Sorenson. A technical treatise by leading traffic authorities. Includes fundamentals, formulae, techniques, and basic practices. Highly recommended for students, practicing engineers and traffic administrators. Published by Institute of Traffic Engineers and National Conservation Bureau, 60 John St., N. Y. C. 350 pages, illustrated. Price $3.25.

THE PORT OF NEW YORK, written and published by the Port of New York Authority. This is the twentieth Annual Report; outstanding for its unusual illustrations and presentation of data concerning the transportation system.

YOUR CITY AT WORK. Los Angeles follows the new trend in reports and presents her Year Book in 1941 style. It contains a short article on each phase and department of the city and is generous with illustrations.

YOU CAN SOLVE THE TRAFFIC PROBLEM, by T. Elmer Transeau, Director, Bureau of Highway Safety, Harrisburg, Pa. Fifty mimeographed pages of basic data on the historical development of the Highway Safety Problem.

AFTER DEFENSE—WHAT?, by the National Resources Planning Board, Washington, D. C. Contains information on public work programs and the maintenance of a hundred billion dollar national income in the post-emergency period.

AUTOMOBILE FACTS AND FIGURES, published by the Automobile Manufacturers Association, New Center Building, Detroit, Mich. A valuable source of information on the facts and trends of motor vehicle mileage, registrations, production, etc.

HIGHWAYS, a valuable reference list of current literature as compiled by th libary staff of the Public Roads Administration.

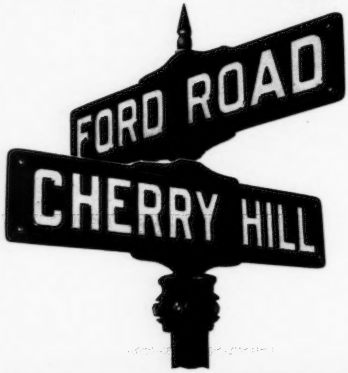
PRIORITY FOR TRAFFIC SAFETY, published by the Automotive Safety Foundation, Tower Building, Washington, D. C. A symposium of articles of interest to every traffic engineer.

FACTS ABOUT ACCIDENTS IN SOUTH CAROLINA, 1940, compiled by the Traffic Engineering Division, South Carolina State Highway Department, Columbia, S. C. Includes data on types, time of occurrence, roadway, vehicle and driver factors.

THE STATE OF TEXAS REGISTERED ENGINEERS JULY 1941 ROSTER, by the State Board of Registration for Professional Engineers, Austin, Texas. Contains in addition to roster, statutes, by-laws, regulations and code of ethics.

LOCAL PLANNING ADMINISTRATION, by Ladislas Segoe, with the collaboration of Walter H. Blucher, F. P. Best, F. Stuart Chapin, Jr., Erwin A. Kraemer, John G. Marr, Arthur J. Robuck. The Institute for Training in Municipal Administration, 1313 E. 60th St., Chicago, Ill. 684 pp., lithoprinted. $7.50, loose-leaf binder. Chapters 6 and 7 are of especial interest to all concerned with municipal traffic and transportation problems.

TRAFFIC ACCIDENTS AND CONGESTION by Maxwell N. Halsey, Associate Director, Bureau for Street Traffic Research, Yale University. Chapter headings include traffic organization, human factors, design remedies and methods of approach. 408 pages, illustrated. $4.00. John Wiley and Sons, Inc., 440 4th Ave., N. Y. C.



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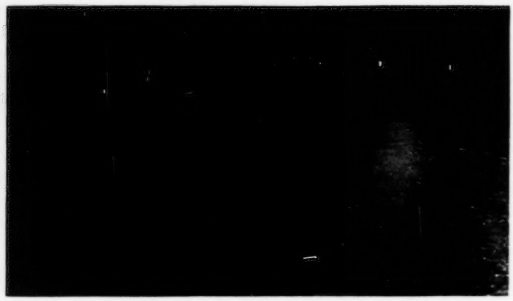

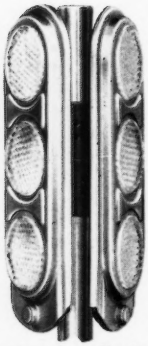

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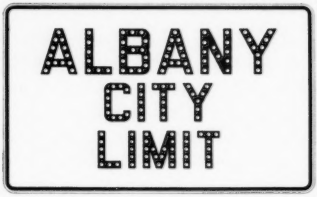

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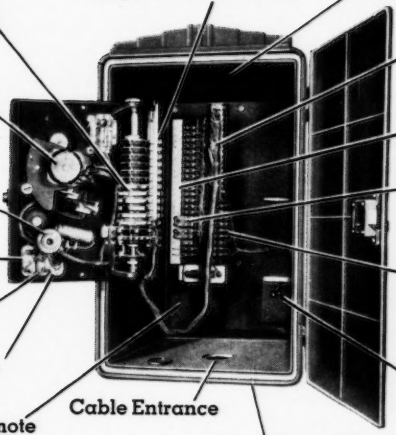

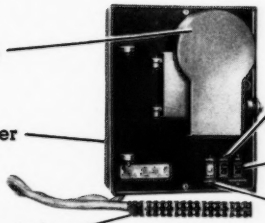

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LOTS FINANCED FROM METERS

Montclair, N. J., has prepared a parking plan for both its central and neighborhood business districts to be financed from receipts of parking meters. The plan consists of providing free municipal parking areas on the interior of blocks behind stores for long term parkers, employees cars and delivery trucks.

At neighborhood store centers parking bays have been designed on secondary streets where stores have conformed to the building setback lines.

Another feature is the creation of a municipally owned strip, approximately 50 feet wide between stores and homes.

It is felt that premature obsolesence of homes adjacent to business areas can be controlled, tax values preserved, business increased, traffic hazards and congestion reduced and fire protection aided.

(Condensed from an article by Damon Stetson in American City, Aug., 1941.)

GLARE PROTECTION

At the I.A.C.P. Convention at Buffalo one speaker doubted that blackouts would be needed for American cities, and pointed out that the blackout in countries abroad has been of questionable value as a military measure while creating many new problems for officials to solve. Nazi fliers can find English cities via radio beams and are aided by the breaking surf on the coastline, plus the reflections from roof tops and from rivers. In modern war, parachute flares and incendiary bombs can easily pierce the blackout. The work of the police, air raid precaution workers and firemen is hindered during blackouts while traffic accidents occur much more frequently and the morale of the people is attacked through reduction in social life. Transportation is slowed, as well as loading and unloading of important war and other materials in the darkness.

The use of small though powerful searchlights and wide angle floodlights directed skyward to confuse and hinder the enemy would also aid protecting aircraft in shooting down the enemy, and would allow civilians to live and work under more normal conditions. In preliminary tests of the plan, the U. S. Army has been reported to have found that even with a long viewing tube airplane pilots could not penetrate the glare to find important targets. Further tests of the plan undoubtedly will be made in the near future to prove the other merits of the idea.

TRAILER TRAFFIC

The American Municipal Association announces that there are about 2,000 trailer settlements in the U. S., with new trailer populations springing up in defense-industry and army-camp areas emphasizing trailer regulations for local and state governments.

Approximately 250,000 trailers are now in use and soon the Federal Government will own 5,000 for emergency housing of defense-industry workers.

Many states have extended tourist-camp regulations to include trailer parks. While municipal and state regulations are usually concerned with health, sanitation, school provision, morals and safety, traffic safety and traffic planning should not be neglected in the control and layout of these trailer communities. The Division of Defense Housing Coordination has prepared suggested standards for "portable" dwellings.

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WORLD'S LONGEST LIGHTED HIGHWAY AN AID TO CANADIAN DEFENSE

An overhead system of lights is now being completed on the 74-mile stretch of Canadian highway known as the Queen Elizabeth Way, which extends between Niagara Falls and Toronto. When this illuminated system is linked with one to be built at Fort Erie, it will create the world's longest path of illumination, 91 miles long, stretching from the Peace Bridge between Buffalo and Fort Erie, to Toronto.

The highway, which is in the heart of Canada's industrial district, has already accelerated the movement of war materials and manufactured goods after dark, and is a good aid to troop movements, according to Canadian officials. Recent daylight maneuvers showed that the average speed of motorized units is from 45 to 50 miles per hour. Lighting permits comparable speeds for night maneuvers.

American tourists will also benefit by this latest contribution to traffic safety and motoring comfort, since the lighting system will enable them to drive safely and comfortably at speeds of 45 and 50 miles an hour without the need of bright upper headlight beams.

Records from the Ontario Registrar of Motor Vehicles already have begun to indicate the favorable effect of this lighting on night traffic. For example, records kept during 1940 along the Queen Elizabeth Way through Peel County (a distance of about eight and one half miles) show that the percentage of night accidents was 42.9 per cent below the night accident percentages for all King's (main) highways.

The major portion of the 70-mile lighting system now in operation utilizes about 4,000 units of an enclosed type pendent luminaire, with a 405-watt incandescent lamp, shielding type reflector and a refractor. The reflector has been scientifically designed by General Electric engineers to collect upward rays of light and direct them down through a refractor globe, which in turn directs the light rays up and down the highway surface for maximum efficiency. Near the Toronto end of the highway, a few sodium (golden light) luminaires are installed as warning lights at important intersecting roads.

The Queen Elizabeth Way is a divided highway, with all the major features of America's most modern roads. The center dividing strip, varying in width from 10 to 50 feet, has some mature trees and new plantings which give the whole Way the effect of a parkway. Most of the highway lights are mounted on mast arms atop poles set 200 feet apart in this center dividing strip. On each pole and mast are two luminaires, one for east-bound traffic, the other for west-bound traffic.. The lights are mounted about 25 feet above the pavement and extend out over the "passing" lane.

The width of this central dividing strip in certain locations helps to prevent annoyance from opposing high or poorly adjusted headlights. The mature trees and new plantings in time will act as a barrier or shield against these headlights, which are not needed for safe night driving along the highway.

WORKER'S CARS IN DEFENSE

Data compiled by the Automotive Manufacturers Association shows that the rearmament program has added to the number of persons driving to work in private automobiles and that 72% of the trips made by industrial workers are for necessary purposes.

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Now Testing in 32 Cities and 18 States

Scotch Flasher Stop Signs are the best accident preventive insurance because they are constantly *flashing* their warning commanding the motorists to stop, and the motorists DO stop—.

ECONOMICAL—Yes,—Two, 1½ volt Graylabel dry cell batteries have operated a Scotch Flasher Stop Sign *continuously* for more than 12 months.

DURABILITY—Yes,—Continuous duty in all kinds of weather relieves the Maintenance Engineers of worries and allows the Safety Engineers to catch up on their sleep.

RESULTS—Yes,—A city traffic engineer reports six accidents in January and February, 1941, at a bad intersection; after installation of Scotch Flashers, on March 6th, not an accident, night or day, up to date.

SANDY says,—"Letter postage will be furnished on all mail orders."

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LEFT-TURN AMBER

Madison is experimenting with a new system of traffic regulation. The new system is in effect at the corner of University Avenue and Park Street which is a 3-way junction of state highways.

The amber caution light that formerly was shown between the green and the red signal has been removed.

The instant that the green light disappears the red signal appears and three seconds after the appearance of this red signal, the amber light appears along with the red, during which period left turns are permitted.

It is planned to change the regulation amber light to a neon amber arrow which will make the left-turn movement more distinctive.

This intersection also has a separate walk interval provided by a white walk light which appears with the red light stopping vehicular traffic. During this period pedestrians move over all four crosswalks.

It is found that by eliminating this amber caution light the traffic stops much quicker on the appearance of the red light, thereby clearing the intersection for the traffic starting on the green on the intersecting street.

Further study at this intersection after the neon arrows have been installed may result in a recommendation that the three-light signal system throughout the city be gradually reduced to two lights—red and green—and amber lights be used on various signals for special movements to be made with caution.

(Condensed from an article by Capt. H. J. Morris, Traffic Bureau, Police Dept., Madison, Wis., in THE MUNICIPALITY, August, 1941.)

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"The objects of the Institute shall be the advancement of the art and science of traffic engineering, the fostering of traffic engineering education, the stimulation of original research in traffic engineering, the professional improvement of its members, the encouragement of intercourse between men with mutual interests in traffic engineering, and the establishment of a central point of reference and union for its members. (Article 1, Section 4 of the Constitution of the INSTITUTE OF TRAFFIC ENGINEERS.)"

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